

### REMARKS

Claims 1-40 were examined by the Office, and in the Office Action of August 27, 2008 all claims are rejected. With this response claim 1-30 are amended, claims 31-40 are cancelled, and new claim 41 is added. All amendments and new claims are fully supported by the specification as originally filed. No new matter is added. Applicant respectfully requests reconsideration and withdrawal of the rejections in view of the following discussion.

### Information Disclosure Statement

With this response applicant hereby submits a copy of the references cited in the information disclosure statement and a new copy of the PTO-1449 form.

### Claim Objections

On page 2 of the Office Action, claims 1-14 and 29-40 are objected to due to informalities. Claim 1 is amended to remove a typographical error, and now reads "0.1" in line 2. Claim 2 is amended to recite "a soluble hydroxyl polymer," and therefore applicant respectfully submits that the objection to claim 2 is overcome. Claims 29 and 30 are amended to recite "being used for" instead of "is used for" as objected to by the Office. The typos in line 10 and line 13 of claim 8 are deleted. The phrase "greater than one" is deleted from claim 6, and claims 34-36 are cancelled. Accordingly, applicant respectfully requests withdrawal of the objections to claims 1-14 and 29-40.

On page 2 of the Office Action, claim 10 is objected to under 37 C.F.R. 1.75(c) as being an improper dependent claim for failing to further limit the subject matter of the previous claim. The Office objects to claim 10, because claim 10 recites "the polymer bridging agent." Claim 10 is amended to recite that the solution of metal-polymer chelates further comprises "a polymer bridging agent." Therefore, applicant respectfully

submits that claim 10 is in proper form, and requests withdrawal of the objection to claim 10.

On page 2 of the Office Action, claims 13 and 14 are objected to under 37 C.F.R. 1.75(c) as being improper dependent claims for failing to limit the subject matter of a previous claim. The Office asserts that claims 13 and 14 merely provide limitations directed towards the intended use for the metal-polymer chelates. Claims 13 and 14 are amended to recite that the metal-polymer chelates further includes the limitations now recited in claims 13 and 14. Therefore, applicant respectfully submits that claims 13 and 14 are in proper form.

#### **Claim Rejections Under § 112**

On page 3 of the Office Action, claims 1-14 and 31-40 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite.

##### **Claims 1-14 and 31-40**

Claim 1 is rejected because it is not clear what is meant by "hydroxyl or hydroxyl amino." This limitation has been deleted from claim 1, and therefore applicant respectfully submits that claim 1 is clear. Furthermore, the Markush group has also been deleted from claim 1. Claim 1 is further amended to clarify that the percentage of each component in the solution of metal polymer chelates is composition percentage. Claim 1 is further amended to replace "R-COOH" with "carboxyl group bearing molecules," and this means carboxylic acids. As such, the rejection to claim 1, as well as claims 2-14 depending from claim 1 is believed to be overcome. The rejection to claims 31-40 is believed to be moot in view of the cancellation of claims 31-40.

##### **Claims 2, 31, 34 and 37**

Claim 2 is rejected because it is asserted that it is unclear if all the components are being required by the claim, or if the water soluble components are chosen from the

list in the claim. Claim 2 is amended to clarify that the solution of metal-polymer chelates also includes a soluble hydroxyl polymer and an amino group bearing molecule. Therefore, applicant respectfully submits that claim 2 is definite. Furthermore, the rejection to claims 31, 34 and 37 is believed to be moot in view of the cancellation of claims 31, 34 and 37.

Claims 3, 32, 35 and 38

Claim 3 is rejected because it is asserted by the Office that is it unclear if all the components are required by the claim, or if the water soluble component is chosen from the list in the claim. Claim 3 is amended to clarify that the solution of metal-polymer chelates also includes soluble carbohydrate low molecular weight molecules and monosaccharide bimolecules, metal salts, and amino group bearing molecules. Therefore, applicant respectfully submits that claim 3 is definite. Furthermore, the rejection to claims 32, 35 and 38 is believed to be moot in view of the cancellation of claims 32, 35 and 38.

Claims 4, 33, 36 and 39

Claim 4 is amended to recite "soluble fatty acid and soluble carbohydrate molecules, and therefore the objected to language has been deleted from claim 4. Therefore, applicant respectfully submits that claim 4 is definite. Furthermore, the rejection to claims 33, 36 and 39 is believed to be moot in view of the cancellation of claims 33, 36 and 39.

Claims 6 and 34-36

Claim 6 is amended to delete the terms "lycium acid," "Amberlite IRC-50," and "ethylene glycol." Therefore, applicant respectfully submits that claim 6 is definite. Furthermore, the rejection to claims 34-36 is believed to be moot in view of the cancellation of claims 34-36.

Claim 8

The term “Amberlite IRC-50” and wording “such as” are deleted from claim 8. Furthermore, the other limitations of claim 8 rejected by the Office are also deleted from claim 8.

Claim 9

Claim 9 is amended to replace “metal-polymer hybrid,” with “metal-polymer chelates,” and applicant respectfully submits that there is sufficient antecedent basis for this limitation.

Claim 12

Claim 12 is amended to recite that the solution of metal-polymer chelates(s) further comprises a silicic acid bearing molecule, and therefore the intended scope of the claim is clear based on this amendment.

Claim 40

The rejection to claim 40 is believed to be moot in view of the cancellation of claim 40.

**Claim Rejections Under § 102**

On page 7 of the Office Action, claims 1-8, 10, 13-14 and 31-39 are rejected under 35 U.S.C. § 102(b) as anticipated by Cho (KR 2001-0106359). Applicant respectfully submits that claim 1 is not disclosed or suggested by Cho, because Cho fails to disclose or suggest all of the limitations recited in claim 1. Cho at least fails to disclose or suggest that the solution of metal-polymer chelates contains biological proteins whereby fermentations are processed by the solution of metal-polymer chelate(s).

In contrast to Cho, the solution of metal-polymer chelates of claim 1 includes biological proteins, being used for preserving the solution of metal polymer chelates by

fermenting. At least this feature of claim 1 is not disclosed or suggested by Cho, since Cho does not disclose or suggest any biological proteins that are capable of carrying out fermentations. Therefore, for at least this reason claim 1 is not disclosed or suggested by Cho.

The claims rejected above and depending from claim 1, are also not disclosed or suggested by Cho at least in view of their dependencies.

The rejection to claims 31-39 is moot in view of the cancellation of claims 31-39.

On page 8 of the Office Action, claims 15-30 are rejected under 35 U.S.C. § 102(b) as anticipated by Cho. Claims 15-30 are amended to dependent from independent claim 1, and therefore are not disclosed or suggested by Cho at least in view of their dependencies.

On page 8 of the Office Action, claims 1-8, 10-11, 13-14 and 31-39 are rejected under 35 U.S.C § 102(b) as anticipated by Seid et al. (U.S. Appl. Publ. No. 2001/0014334). Applicant respectfully submits that claim 1 is not disclosed or suggested by Seid, because Seid fails to disclose or suggest all of the limitations recited in claim 1. Seid at least fails to disclose or suggest that the solution of metal-polymer chelates contains biological proteins whereby fermentations are processed by the solution of metal-polymer chelate(s).

In contrast to Seid, the solution of metal-polymer chelates of claim 1 includes biological proteins, being used for preserving the solution of metal polymer chelates by fermenting. At least this feature of claim 1 is not disclosed or suggested by Seid, since Seid does not disclose or suggest any biological proteins that are capable of carrying out fermentations. Seid at most discloses that the metal/chitosan complex may be coupled to an antigen, but the antigen is not a biological protein capable of fermentation,

as required by claim 1. Therefore, for at least this reason claim 1 is not disclosed or suggested by Seid.

The claims rejected above and depending from claim 1, are also not disclosed or suggested by Seid at least in view of their dependencies.

The rejection to claims 31-39 is moot in view of the cancellation of claims 31-39.

On page 9 of the Office Action, claims 15-30 are rejected under 35 U.S.C. § 102(b) as anticipated by Seid. Claims 15-30 are amended to dependent from independent claim 1, and therefore are not disclosed or suggested by Seid at least in view of their dependencies.

#### **Claim Rejections Under § 103**

On page 10 of the Office Action, claims 9-10 and 40 are rejected under 35 U.S.C. § 103(a) as unpatentable over Seid in view of Bolotin et al. (U.S. Appl. Publ. No. 2003/0224974). Claims 9 and 10 ultimately depend from an independent claim, and therefore are not disclosed or suggested by the cited references at least in view of their dependencies. The rejection to claim 40 is moot in view of the cancellation of claim 40.

#### **Double Patenting**

Claims 13 and 14 are amended in a manner that is believed to include additional limitations with respect to claim 1. Therefore, applicant respectfully submits that a double patenting rejection is improper with respect to claims 13 and 14.

Claim 10 is amended in a manner that is believed to include additional limitations with respect to claim 8. Therefore, applicant respectfully submits that a double patenting rejection is improper with respect to claim 10.

**New Claim 41**

New claim 41 ultimately depends from an independent claim, and therefore is believed to be novel and nonobvious in view of the cited references.

**Conclusion**

For at least the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly solicited. The undersigned hereby authorizes the Commissioner to charge Deposit Account No. 23-0442 for any fee deficiency required to submit this response.

Respectfully submitted,

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